UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,012	04/26/2007	Virgil Allen Watson	P06721US1-WATSON	4193

34082 7590 12/09/2008

ZARLEY LAW FIRM P.L.C.
CAPITAL SQUARE
400 LOCUST, SUITE 200
DES MOINES, IA 50309-2350

EXAMINER	
DYE, ROBERT C	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
12/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,012	WATSON ET AL.	
	Examiner	Art Unit	
	ROBERT DYE	4151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/05/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 3-8 are objected to because of the following informalities: Appropriate correction is required.

1. Claims 3, 5 and 7 recite the limitation "second object" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claim.

2. Claims 5-8 recite the limitation "mounting feature" in lines 2-3 of claim 5, line 1 of claim 6, line 5 of claim 7 and line 1 of claim 8. There is insufficient antecedent basis for this limitation in the claim.

3. Claim 4 recites the limitation "planar substrate" in line 3. There is insufficient antecedent basis for this limitation in the claim.

4. It appears that the claims were intended to reference claim 2 which claims a sign and includes attachment to a second object, a planar substrate and a mounting feature. The referenced claim 1 does not contain these features.

5. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Abrams et al. (USP 5,800,757).

10. Abrams et al. (hereinafter Abrams) teach a sign with a sheet or film 204 containing a graphics side that is integrally molded onto a planar substrate material 16 (see figure 17) and contains holes 220 on the rear side for mounting to a frame or pole (col 19, lines 12-13, figure 20).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1 and 3-6 rejected are under 35 U.S.C. 103(a) as being unpatentable over Abrams et al. (USP 5,800,757).

15. Regarding claim 1, Abrams et al. (hereinafter Abrams) teach a method for making a sign for viewing by persons comprising: providing a mold having an area substantially equal to the size of the sign designed (see figure 17, mold members 20a and 20b are equal in size to desired sign shape), placing sheet 304 in the mold (col 19, lines 38-39), placing extruded billet 16 into mold (col 19, line 40-42) (billet material is heated from extruder) and mold members are pressed to mold the sign (col 19, lines 51-56), and then removed from the mold (box 222, figure 16B). Abrams teach that the molding press 18 comprises a press heater and controller for controlling the temperature of the mold members when they are molding the part (col 11, line 65-col 12 line 1). Furthermore Abrams teach that the sheet or film 204 is molded such that it is an integral part of the backboard 200. Abrams does not explicitly state the steps of allowing the material to harden and erecting the sign in a traffic area; however, it would have been obvious to a person having ordinary skill in the art at the time of the

invention that such steps would be required to complete the molding of the sign and to place the sign into use.

16. Regarding claim 3, Abrams teaches that the sign contains holes 220 (mounting feature) on the rear side (figure 20) for mounting the sign to a frame or pole (securing to a post) (col 19, lines 10-15).

17. Regarding claim 4, Abrams teaches that the sign contains a plurality of ribs 202 which facilitates strengthening the sign (col 18, lines 44-47).

18. Regarding claim 5, wherein the second object is a second sign, the Abrams teaches a point of use promotion sign (figure 21). Since it is well-known in the marketing industry to use two-sided point of use promotion signs to attract customers from two directions, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the promotional sign of Abrams to another molded identical promotional sign in order to attract customers from two directions.

19. Regarding claim 6, wherein the mounting feature is a male snap element adapted to mate with a corresponding female snap element, Abrams does not teach a male snap element. However, male and female snap elements are well known in the molding art as an effective means for connection. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a male snap element in the sign of Abrams (modified) in order to efficiently and effectively connect the signs.

20. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrams et al. (USP 5,800,757) in view of Bowers et al. (PG Pub 2003/0154639).

21. Regarding claim 7, Abrams teaches a sign with a label integrally molded onto planar substrate and a mounting feature for securing the sign. Abrams does not teach a sign with an end extending between the front and back side that includes mounting features for securing the sign to a second sign. In the same field of endeavor of sign manufacture, Bowers et al. teach a sign having a front with a label and a back side. In one embodiment, Bowers et al. teach a sign with an extending end having mounting features for connection to a second sign (see figure 7, wherein mounting brackets 46a, 46b connect two display signs, and paragraph 33). The configuration of this embodiment would place the labels on each sign directly next to each other such that they are contiguous. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to connect the signs end to end as taught by Bowers et al. in the method of Abrams for the purpose of increasing the customizability of the sign and allow for more diverse messages to be displayed to attract or inform persons.

22. Regarding claim 8, in regard to a groove, such is well-known in the molding art as an effective means for connection. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a groove in the sign of the hypothetical combination of Abrams and Bowers in order to efficiently and effectively connect the signs.

23. Claims 9, 12, 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (USP 4,865,793) in view of Abrams et al. (USP 5,800,757).

24. Regarding claim 9, Suzuki et al. (hereinafter Suzuki) teach a method for manufacturing an insert-molded product wherein a first and second mold portions are provided (see figure 9, wherein first mold portion 32 and second mold portion 25 are located opposite to each other), an injection device is associated with the first mold portion (see figure 9, item 31), an ejector system is associated with the first mold portion (the stripper plate or guide member 36 acts to eject the molding at the end of the molding cycle, col 7, lines 3-5), an insert is placed into the mold, the mold portions are closed and a material is injected into the first mold portion via the injection device (see figure 10).

25. Regarding the placement of the insert, the embodiment shown in Figure 9 illustrates the insert being held by guide member 36 before being positioned into the second mold. However, Suzuki teaches that the insert may be alternatively placed into the second mold portion to be firmly held with a vacuum device (see figure 11). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to position the insert in the second mold as taught by Suzuki for the purpose of securing the insert to the mold with a vacuum device (figure 11).

26. Suzuki does not teach the method for use in the manufacture of signs. In the same field of endeavor of molding thermoplastic articles with sheet-like

inserts, Abrams teaches that a sign (point-of-purchase sign, col 20, lines 33-34) may be produced via the use of a printed label as the insert in a molding operation (see figures 17 and 21). It would have been obvious to a person having ordinary skill in the art to produce a sign as taught by Abrams with the method of Suzuki in order to form a diverse article capable of attracting customers and relaying information.

27. Regarding claim 12, Suzuki teaches that the injection device injects directly into the first mold portion 32 as shown in figures 9 and 10.

28. Regarding claim 14, Suzuki teaches that the “molding is ejected and removed with the air of the stripper plate, so that the injection molding is achieved more efficiently", col 7, lines 2-5. The stripper plate which serves as both a guidance member and a means to eject the molded insert is shown gripping the insert from its outer perimeter. While Suzuki does not teach that the ejection system contacts the molded body from the side opposite the label, it is well known in the molding art to eject a molded product without causing damage to said product. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to arrange the ejector system opposite the label side such that it would not damage the graphic face of the resulting product.

29. Regarding claim 15, Suzuki teaches the use of a guidance member (item 26 in figure 6 and item 36 in figure 9) for accurately positioning the insert into the second mold. Suzuki further teaches the use of an automated arm (item 22) for transferring the label into the mold cavity. Although the arm does not directly

mate with the guidance member, it is well known in the art to accurately place the label in the mold and it would have been obvious to one of ordinary skill in the art at the time the invention was made to mate the arm with the mold in order to ensure accurate placement of the label.

30. Regarding claim 19, wherein two sets of labels are provided and a label from the first set and a label from the second set are placed in the mold portion, such is well-known in the insert art. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to insert two labels from two sets of labels into the mold of the hypothetical combination of Suzuki and Abrams in order to form a diverse article.

31. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (USP 4,865,793) in view of Abrams et al. (USP 5,800,757) as applied to claim 9 above, and further in view of Dobler (USP 5,520,876).

32. The hypothetical combination of Suzuki and Abrams teaches a method for manufacturing a sign by placing an insert into a mold and injection molding material onto said insert; however, the combination does not teach a method wherein the steps of placing the label and removing the previously formed product are performed simultaneously and wherein the steps are performed by an automated device which enters between the two mold portions a single time.

33. In the same field of endeavor of injection molding with mold inserts, Dobler teaches an automated arm which simultaneously places the label into one mold

portion while removing the previously formed product from the other mold portion (see figures 3-4, col 9 lines 56-60, col 10 lines 11-17). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have used an automated device to simultaneously place a label and remove the previously formed product as taught by Dobler in the method of the hypothetical combination of Suzuki and Abrams for the benefit of reducing the number of manufacturing steps required to produce the product.

34. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (USP 4,865,793) in view of Abrams et al. (5,800,757) as applied to claim 12 above, and further in view of Assalita et al. (USP 5,922,367, already of record).

35. The hypothetical combination of Suzuki et al. and Abrams et al. does not teach a method wherein a heated sprue bushing is used to eliminate the need to manually trim the sign. In the same field of endeavor of injection molding, Assalita et al. teach that the use of a heated sprue bushing in an injection mold for the benefit of reducing material waste by preventing material from solidifying within the sprue bushing (col 1, lines 44-47, col 4, lines 67-68). Assalita et al. further teaches that the sprue material, if allowed to solidify, has to be removed from the part and discarded (col 1, lines 32-35). Thus it would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a heated sprue bushing as taught by Assalita et al. in the method of the hypothetical combination of Suzuki and Abrams for the benefit of reducing

material waste and reducing manufacturing steps by eliminating the need to remove excess sprue material from the formed part (col 1, lines 44-47, col 4, lines 67-68).

36. Claim 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (USP 4,865,793) in view of Abrams et al. (USP 5,800,757) as applied to claim 15 above, and further in view of Hasl et al. (USP 4,880,368).

37. The hypothetical combination of Suzuki and Abrams does not teach a method wherein the label hopper contains a guidance member adapted to mate with the automated device responsible for transferring labels to the mold. In the same field of endeavor of in-mold labeling, Hasl et al. teaches a label hopper with fingers 92 and 92a which adapt to mate with the cutouts 86 in the heads of 75 (label transfer device) (see figure 4, col 9, lines 46-50) for the purpose of aligning the label transfer device with the labels. Thus, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have used guidance members on the label hopper as taught by Hasl et al. in the method of Suzuki and Abrams for the purpose of aligning the automated label transfer device.

38. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (USP 4,865,793) in view of Abrams et al. (USP 5,800,757) and Hasl et al. (USP 4,880,368) as applied to claim 16 above, and further in view of Hellmer et al. (USP 4,397,625).

39. Regarding claim 17, the hypothetical combination of Suzuki et al., Abrams et al. and Hasl et al. teach a method for manufacturing a sign via in-mold labeling as described above in claim 16, but does not teach a method wherein the orientation of the label is adjusted on the label hopper. In the same field of endeavor of methods for manufacturing products via injection molding with in-mold inserts, Hellmer et al. (hereinafter Hellmer) teach a method wherein a label hopper is provided with mechanisms designed to hold a label in a particular orientation (see figure 3). Hellmer teach that a "labels L are maintained at a preset orientation by a plurality of elongated guide rods 64 which are arranged in accordance with the configuration of the particular label" (col 3, lines 35-43). Thus it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have used orientation adjustment mechanisms as taught by Hellmer in the method of the aforementioned combination for the benefit of holding the labels in a preset orientation for pick up by the

40. Regarding claim 18, wherein the adjustment mechanism is used that can adjust in a lateral direction, a vertical direction and rotational direction, Hellmer et al. does not explicitly describe the directions with which the guidance rods can be arranged. However, Hellmer does state that the guidance rods are positioned in accordance with the configuration of the particular label (col 3, lines 35-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to position the guidance rods of Hellmer as necessary in a lateral, vertical or rotational direction in the hypothetical combination of Suzuki,

Abrams and Hasl for the benefit of ensuring an accurate placement of the insert in the molding device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT DYE whose telephone number is (571)270-7059. The examiner can normally be reached on Monday to Friday 8:00AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. D./

/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4151